

RDA Phase Check

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1. Introduction

1.1 Overview

Phase Check, namely the production information flag check, its principle is that: write a flag in the Production Info area of mobile phone flash which indicates the success or fail status of the station after it is checked. Except for the first station, each following check station can determine which stations in the front has passed the check by reading flag bit in mobile phone flash. If the check station has not passed the test, the tool will send error message pointing out which station is the mobile phone failed. If both the check station and current station have pass the test, the tool will write a flag bit in mobile phone flash which indicates the current station successfully pass the check.

1.2 Mechanism of Phase Check

Currently, there are two types of RDA software platform Phase Check. One mechanism called 0xFAC00100, the other new mechanism called 0xFAC00200.

✧ Note:

0xFAC00200 Phase Check needs mobile terminal code support.

The two kinds of Phase Check differ greatly in data structure. To distinguish the two mechanisms in the code of test tool and mobile terminal, an identity is made in the Production Info area when initialized the flash. The data structure of Phase Check named magic number. The magic number of old mechanism is 0xFAC00100 while the magic number of new mechanism is 0xFAC00200.

In order to avoid the risk of data corruption caused by erase flash, the new mechanism divides the 8Kbyte flash into eight equal size blocks. Whenever write flag information after a station is finished, it is no longer erase flash but use only one block after finish a station, thus can avoid the risk caused by erasing flash. The 8Kbyte flash will be erased unless all of the units have been completed. This probability is very small in the production line.

2. Operation Guide of Phase Check

2.1 Initialization of Phase Check

The production information area of flash must be initialized before using Phase Check. This step can be completed through download tool. If user do not use download tool but use burning chip to write program into flash, this step can be completed in WriteIMEI tool by enable initialize production information function.

2.1.1 Initialize production information by download tool

Find PhaseCheck.ini file in cfg folder as shown in Figure 2-1.

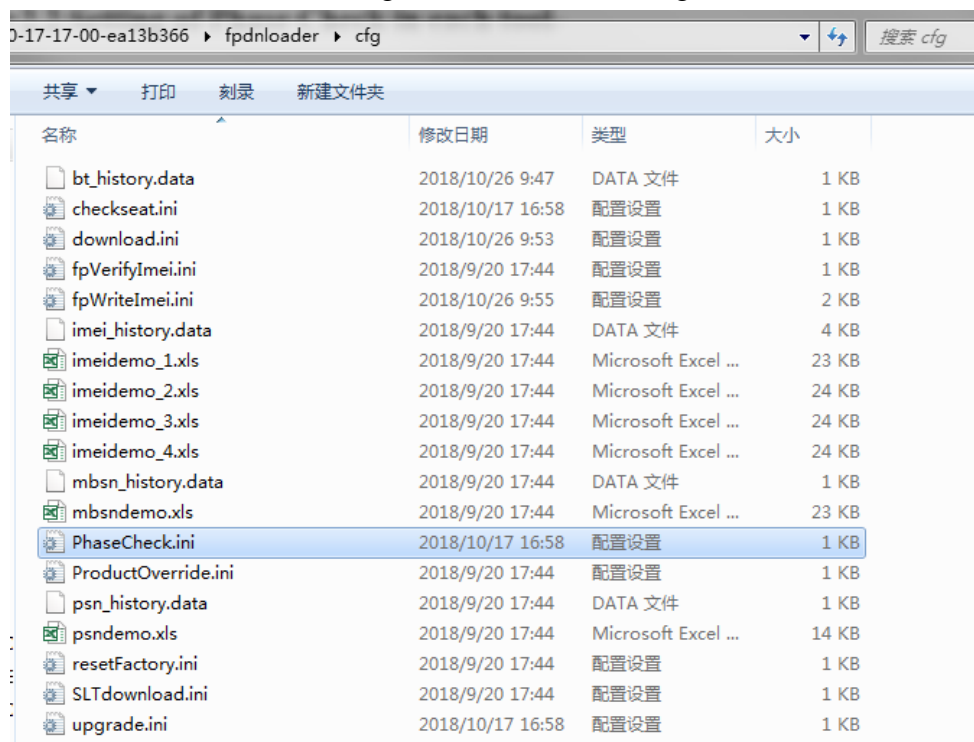


Figure 2-1 PhaseCheck.ini file in cfg folder

Open PhaseCheck.ini file:

```

1  [VERSION]
2  # version :      0xFAC00200
3  MAGIC NUMBER    = 0xFAC00200
4
5  [STATION]
6  # Max. station number is 15
7  # Max. station name length is 12 characters
8  # Empty station name means the station index in't used
9  # Warning:CALIB/SMTMMI/BBAT/ANNTTEST/NSTEST/ASMMMI can not be renamed!!!!!!
10 STATION 0        = DOWNLOAD
11 STATION 1        = CALIB
12 STATION 2        = NSTEST
13 STATION 3        = SMTMMI
14 STATION 4        = BBAT
15 STATION 5        = ASMMMI
16 STATION 6        = ANNTTEST
17 STATION 7        = WRITESN
18 STATION 8        = NBCALIB
19 STATION 9        = NBNSTEST
20 STATION 10       = NBANNTTEST
21 STATION 11       =
22 STATION 12       =
23 STATION 13       =
24 STATION 14       =
25

```

Figure 2-2 PhaseCheck.ini file

Note the information shown in Figure 2-2. It needs to confirm the magic number before use. The maximum total number of Phase Check stations is 15. The length of station name has a maximum of 12. If the station name is empty, it means this station is not in use. Finally, user should confirm the name and order of each station.

If you need to add stations, simply add the name in the corresponding position.

2.1.2 Initialize production information by WriteIMEI tool

If user do not use download tool but use burning chip to write program into flash. It needs to open the PhaseCheck.ini file in cfg folder and set the WRITESN as the first station. Besides, the initialization function should be enabled by select the corresponding option on WriteIMEI tool setup interface, as shown in Figure 2-3. As the download tool will initialize the factory data by default, it does not need to manually set on the user interface.

<input checked="" type="checkbox"/> Phase Check		Other	
Current Station	WRITESN	<input checked="" type="checkbox"/> InitializeFactoryData	<input type="checkbox"/> FactoryReset
Check Station	DOWNLOAD	<input type="checkbox"/> ScanGun(MultiArray)	
		<input type="checkbox"/> Power Off	

Figure 2-3 Setup dialog of WriteIMEI tool

2.2 Setting of Phase Check in each tool

The function of Phase Check and the setting of current station and check station can be modified in the user interface of each tool. The setting information will be saved in corresponding configuration file. Besides, user can modify Phase Check setting by directly modify the configuration file of each tool.

2.2.1 Phase Check setting of download/upgrade tool

1. Phase Check setting of download tool

The setup interface of download tool is shown in Figure 2-4.

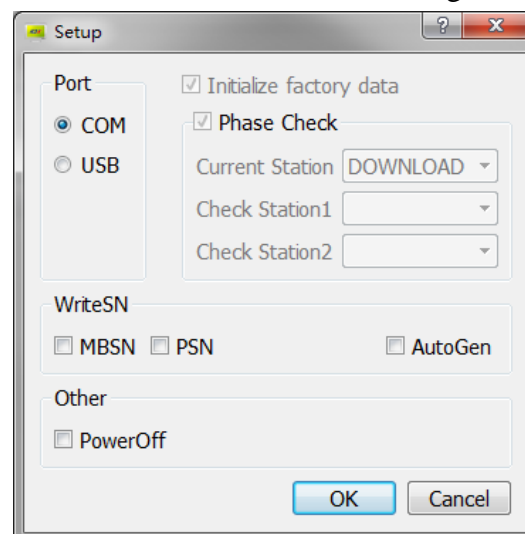


Figure 2-4 Setup interface of download tool

The download tool initialize factory data by default (cannot modify through configuration file).

Phase Check function can be enabled by selecting Phase Check box. The current station need to be set as DOWNLOAD and the corresponding bit in flash will be update after completion of phase check.

Besides, user can modify phase check parameter by directly modifying configuration file. Open the download.ini file in cfg folder, as shown in Figure 2-5.

isPhaseCheck = 1; Enable Phase Check function;

isEnabledPhaseCheck = 0; Set the “Phase Check” uneditable;

checkStation = ; represent “Check Station 1”;

checkStation2 = ; represent “Check Station 2”;

currentStation = ; the current station, the corresponding bit in flash will be update after completion of phase check.

enabled by modifying the upgrade.ini file in cfg folder, as shown in Figure 2-7.

```
1  [upgrade]
2  useCom=0
3  useUsb=1
4  enableUSB=1
5  lodFname=
6  cfpFname=
7  isPhaseCheck=1
8  isEnabledPhaseCheck=0
9  checkStation=NBCALIB
10 checkStation2=
11 currentStation=
12 initFactData=0
13 isEnabledInitFact=0
14 winGeometry=@ByteArray(\x1\xd9\xd0\xcb\x0\x1\x0\x0\x0\x2(\x0\x1\x19
15 tblState=@ByteArray(\x0\x0\xff\x0\x0\x0\x0\x0\x1\x0\x0\x1\x0\x0\x0\x0
16 language=Chinese
17 startDelay=3000
18 isCheckCalib=0
19 isCheckNBCalib=1
20 isKeepInfo=1
21 isEraseUser=0
22 PowerOff=0
23
```

Figure 2-7 upgrade.ini file

2.2.2 Phase Check setting of WriteIMEI tool

If the initialization of production information does not carry out at DOWNLOAD station, it should be done in WriteIMEI tool (By select the “InitializeFactoryData” option on setup interface).

The setup interface of WriteIMEI tool is shown in Figure 2-8. Select the Phase Check option and set the current station and check station. If it is the first station, the check station should be empty.



☒ Phase Check

Current Station: WRITESN

Check Station: DOWNLOAD

Figure 2-8 Phase Check setup interface of WriteIMEI tool

2.2.3 Phase Check setting of VerifyIMEI tool

The setup interface of VerifyIMEI tool is shown in Figure 2-9. Select the Phase Check option and set the current station and check station.

☒ Phase Check
 Current Station: VERIFYIMEI
 Check Station: WRITESN

Figure 2-9 Phase Check setup interface of VerifyIMEI tool

3. Configuration example

If the production test procedure of a factory is as follow:

DOWNLOAD→WRITESN→IMEI→IMEIVERIFY

Then the use of Phase Check is as follow:

First, configure the PhaseCheck.ini file in cfg folder, as shown in Figure 3-1:

```

[VERSION]
# version 1: 0xFAC00100
# version 2: 0xFAC00200
MAGIC NUMBER      = 0xFAC00200

[STATION]
# Max. station number is 15
# Max. station name length is 12 charactors
# Empty station name means the station index in't used
STATION 0         = DOWNLOAD
STATION 1         = WRITESN
STATION 2         = IMEI
STATION 3         = IMEIVERIFY
STATION 4         =
STATION 5         =
STATION 6         =
STATION 7         =
STATION 8         =
STATION 9         =
STATION 10        =
STATION 11        =
STATION 12        =
STATION 13        =
STATION 14        =
  
```

Figure 3-1 Configuration of PhaseCheck.ini file

Next, setting of other stations is shown below:

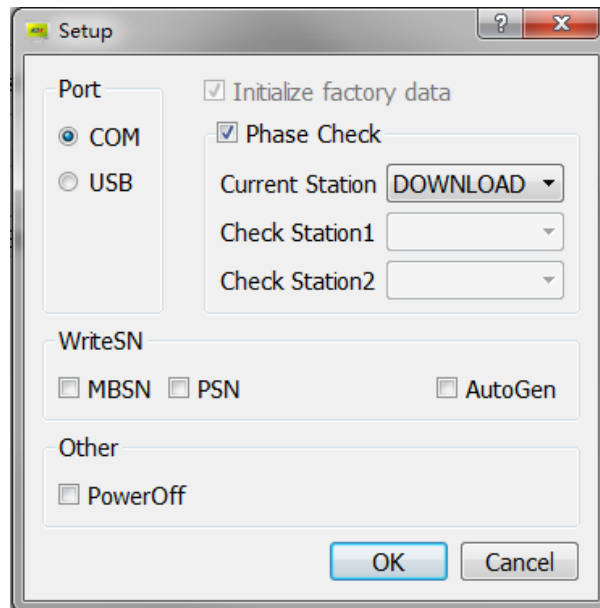


Figure 3-2 Phase Check setting of download tool

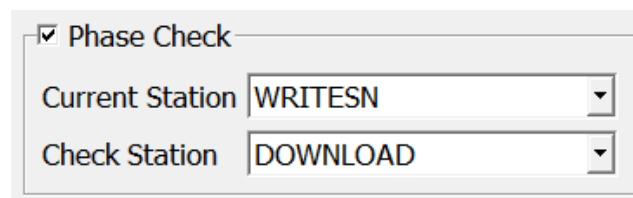


Figure 3-3 Phase Check setting of fpWriteIMEI tool

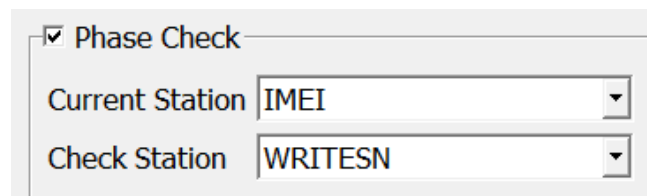


Figure 3-4 Phase Check setting of fpWriteIMEI tool

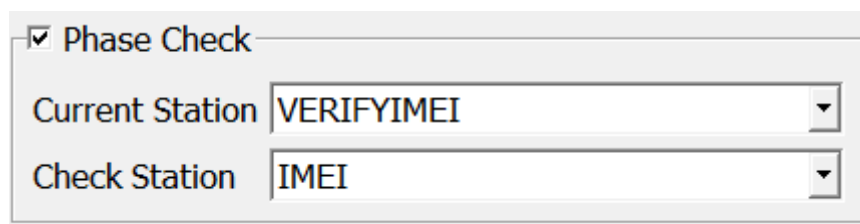


Figure 3-5 Phase Check setting of fpVerifyIMEI tool

User can also change Phase Check setting by modifying configuration files. The setup steps are as follow:

